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UNCLAS UNVIE VIENNA 000302

E.O. 12958: N/A

TAGS: TSPA UNGA UNPUOS AORC ENRG TRGY AORC KNNP OTRA AU VE

SUBJECT: COPUOS: Adoption of SAFETY FRAMEWORK FOR NUCLEAR POWER SOURCE APPLICATIONS at 52nd Session June 3-12, 2009

REF: A. UNVIE VIENNA 000103 ¶B. STATE 05545

11. (U) SUMMARY: At the June 3-12, 2009 session of the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS), the joint Scientific and Technical Subcommittee (STSC)-International Atomic Energy Agency (IAEA) Safety Framework for the Use of Nuclear Power Source (NPS) Applications in Outer Space was approved. This marked the end of a multi-year effort by the STSC to develop an international framework of goals and recommendations for the safety of NPS applications in outer space. The new Framework was developed jointly by the STSC NPS Working Group and the IAEA and its successful conclusion marks a unique collaboration between the two organizations. The Framework had been approved by the STSC at its annual meeting in February (Ref A), and by the IAEA at its Commission on Safety Standards meeting in April. The development of the Safety Framework also proved to be a good example of U.S.-Russian Federation cooperation. The two nations with the most experience in space NPS applications worked together in ensuring that the Framework's development was successful and did not include provisions that would have impeded safe and useful national and international employment of NPS in outer space. END SUMMARY.

BACKGROUND

- $\P2$ . (U) The use of nuclear power sources in space has been an issue of concern for the international community since the 1960s when the Soviet Union began launching its Radar Ocean Reconnaissance Satellites (RORSATs), powered by nuclear reactors using uranium-235. One RORSAT, Cosmos 954, failed to achieve proper orbit and re-entered the Earth's atmosphere in January, 1978, crashing in Canada's Northwest Territories and spilling radioactive fuel over a large area. Another nuclear reactor-powered satellite, Cosmos 1402, failed to boost into storage orbit in late 1982 and the reactor core landed in the South Atlantic in February, 1983.
- $\P3$ . (U) As a result of concerns over the Cosmos reactor crashes and the Soviet Union's continuing use of such satellites, UNCOPUOS, through its Legal Subcommittee, drafted a set of non-binding

principles that were adopted by the General Assembly in 1992. The U.S. took the view that the UN Principles Relevant to the Use of Nuclear Power Sources in Outer Space did not provide sufficient technical clarity in some instances for developing national and international safety frameworks. For that reason, the U.S. has led efforts since the mid-1990s in UNCOPUOS to develop a safety framework for the use of nuclear power sources in space that would serve as a guide for countries to use in their respective national legislation and regulatory regimes.

## DEVELOPMENT OF THE FRAMEWORK

- ¶4. (U) Initial planning for the Framework began at the STSC's fortieth session in 2003, when the Committee adopted a work plan for 2003-2006 for developing the objectives, scope and attributes of an international, technically-based framework of goals and recommendations for assuring the safety of planned and currently foreseeable space nuclear power source applications. This specification for the framework, along with an assessment of potential STSC implementation options involving the IAEA for developing the framework, was accomplished by the STSC Working Group on NPS, chaired by Sam Harbison of the United Kingdom. U.S. participants in the working group included representatives from the Department of Energy and NASA. The IAEA actively participated in carrying out this work plan.
- 15. (U) At the forty-fourth STSC session in 2007, a new multi-year work plan was approved for the joint development of the safety framework, a set of voluntary measures that could be used to establish national and international intergovernmental mechanisms to ensure the safe development space missions employing NPS applications.
- 16. (U) At the forty-sixth session in 2009, one year earlier than scheduled, the STSC approved the Safety Framework; it was subsequently approved by the IAEA at its April 2009 meeting of the Commission on Safety Standards. The Safety Framework is expected to be endorsed by the UN General Assembly in late 2009, with the approval of the 2009 UNCOPUOS report. The IAEA has commenced the publication of hard copies of the Safety Framework. The Safety Framework will also be posted to the IAEA and United Nations Office for Outer Space Affairs web sites.
- 17. (U) Throughout the development of the Safety Framework, U.S. experts worked to ensure that measures included in the document represented best practices of U.S. nuclear, defense, and civil space agencies.

Comment

18. (U) U.S. and Russian Federation experts worked together in a coordinated effort that facilitated the successful development of the Framework and ensured that it did not include provisions which would actually impede the safe and useful employment of NPS in outer space. End comment.

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